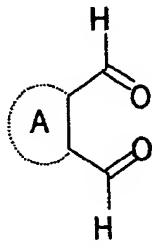
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Please cancel claims 36 and 39 without prejudice or disclaimer and replace original claims 37 and 40 with amended claims 37 and 40. A full set of the pending claims, including all current amendments, is set forth below.

1. (Original) A composition for the dyeing of keratin fibers, comprising, in a medium suitable for dyeing:

- at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I):



(I)

wherein A is chosen from:

- fused and non-fused, aromatic and non-aromatic monocarbocyclic and polycarbocyclic groups comprising from 6 to 50 carbon atoms;
- fused and non-fused, aromatic and non-aromatic, 5- to 30-membered monoheterocyclic and polyheterocyclic groups comprising at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus;

the group A possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl,

C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals;

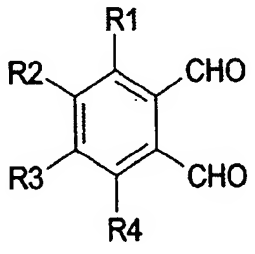
- at least one sulphur compound chosen from compounds of formula (II) and of formula (III):

R-SH (II)

R-S-S-R' (III)

wherein R and R', which may be identical or different, are chosen from saturated and unsaturated, branched and unbranched groups comprising from 1 to 100 carbon atoms, optionally comprising from 1 to 30 unsaturations, and which may comprise at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus, R and R' possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl, C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, amino, C_1-C_4 monoalkylamino, C_1-C_4 dialkylamino, C_1-C_4 monohydroxyalkylamino, C_1-C_4 dihydroxyalkylamino, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals.

2. (Original) The composition according to Claim 1, wherein the at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I) is chosen from ortho-phthalaldehyde derivatives of formula (IV):



(IV)

wherein R_1, R_2, R_3 and R_4 are each independently chosen from a hydrogen atom, from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, nitro and sulphonato radicals, and from 5- to 8-membered non-aromatic heterocyclic nitrogenous groups.

3. (Original) The composition according to Claim 2, wherein the groups R_1, R_2, R_3 and R_4 are each independently chosen from C_1-C_4 alkyl and C_1-C_4 alkoxy groups.

4. (Original) The composition according to Claim 3, wherein the ortho-phthalaldehyde derivatives of formula (IV) are chosen from ortho-phthalaldehyde and 4,5-dimethoxyphthalaldehyde.

5. (Original) The composition according to Claim 1, wherein the at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I) is chosen from naphthalenedicarboxaldehyde, anthracenedicarboxaldehyde and thiophenedicarboxaldehyde derivatives.

6. (Original) The composition according to Claim 5, wherein the at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I) is chosen from 1,2-naphthalenedicarboxaldehyde, 2,3-napthalenedicarboxaldehyde, 2,3-anthracenedicarboxaldehyde and 2,3-thiophenedicarboxaldehyde.

7. (Original) The composition according to Claim 1, in which R and R' in formulas (II) and (III), which may be identical or different, each contains from 1 to 4 carbon atoms.

8. (Original) The composition according to Claim 7, wherein the at least one sulphur compound chosen from compounds of formula (II) and formula (III) is

chosen from ethanethiol, 2-aminothiophenol, thioglycolic acid, cysteamine and cystamine.

9. (Original) The composition according to Claim 1, wherein the at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I) is present in the composition in an amount ranging from 0.01% to 30% by weight relative to the total weight of the composition.

10. (Original) The composition according to Claim 1, wherein the at least one sulphur compound chosen from compounds of formula (II) and formula (III) is present in the composition in an amount ranging from 0.01% to 30% by weight relative to the total weight of the composition.

11. (Original) The composition according to Claim 1, further comprising at least one amino acid.

12. (Original) The composition according to Claim 11, wherein the at least one amino acid is chosen from glycine, alanine, valine, leucine, isoleucine, methionine, phenylalanine, proline, serine, threonine, cysteine, asparagine, glutamine, tyrosine, histidine, lysine, ornithine, arginine, aspartic acid, glutamic acid and tryptophan.

13. (Original) The composition according to Claim 11, wherein the at least one amino acid is present in the composition in an amount ranging from 0.01% to 20% by weight relative to the total weight of the composition.

14. (Original) The composition according to Claim 1, further comprising at least one peptide.

15. (Original) The composition according to Claim 1, further comprising at least one protein.

16. (Original) The composition according to Claim 1, further comprising at least one surfactant.

17. (Original) The composition according to Claim 16, in which the at least one surfactant is chosen from anionic, amphoteric, nonionic, zwitterionic and cationic surfactants.

18. (Original) The composition according to Claim 1, further comprising at least one compound chosen from polyols, polyol ethers, and aromatic monoalcohols.

19. (Original) The composition according to Claim 18, wherein the polyols comprise from 2 to 100 carbon atoms and from 2 to 25 hydroxyl radicals, and have a molecular weight less than 500.

20. (Original) The composition according to Claim 19, wherein the polyols are chosen from propylene glycol, glycerol, hexylene glycol, butylene glycol, isopropylene glycol, neopentyl glycol and polyethylene glycols.

21. (Original) The composition according to Claim 18, wherein the polyol ethers are chosen from propylene glycol monomethyl ether and dipropylene glycol monomethyl ether.

22. (Original) The composition according to Claim 18, wherein the aromatic monoalcohols are chosen from monocyclic and polycyclic compounds comprising from 6 to 50 carbon atoms.

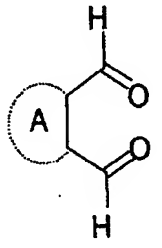
23. (Original) The composition according to Claim 22, wherein the aromatic monoalcohols are chosen from benzyl alcohol.

24. (Original) The composition according to Claim 16, wherein the at least one surfactant is present in the composition in an amount ranging from 0.1% to 20% by weight relative to the total weight of the composition.

25. (Original) The composition according to Claim 18, wherein the at least one compound chosen from polyols, polyol ethers, and aromatic monoalcohols is present in the composition in an amount ranging from 0.1% to 20% by weight relative to the total weight of the composition.

26. (Original) A process for dyeing keratin fibers, comprising applying to keratin fibers for a leave-in time sufficient to obtain a desired coloration:

a composition (a) comprising, in a medium suitable for dyeing, at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I):



(I)

wherein A is chosen from:

- fused and non-fused, aromatic and non-aromatic monocarbocyclic and polycarbocyclic groups comprising from 6 to 50 carbon atoms;
- fused and non-fused, aromatic and non-aromatic, 5- to 30-membered monoheterocyclic and polyheterocyclic groups comprising at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus;

the group A possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl,

C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals; and

a composition (b) comprising at least one sulphur compound chosen from compounds of formula (II) and of formula (III):

R-SH (II)

R-S-S-R' (III)

wherein R and R', which may be identical or different, are chosen from saturated and unsaturated, branched and unbranched groups comprising from 1 to 100 carbon atoms, optionally comprising from 1 to 30 unsaturations, and which may comprise at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus, R and R' possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl, C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, amino, C_1-C_4 monoalkylamino, C_1-C_4 dialkylamino, C_1-C_4 monohydroxyalkylamino, C_1-C_4 dihydroxyalkylamino, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals.

27. (Original) The process according to Claim 26, wherein composition (b) further comprises at least one amino acid.

28. (Original) The process according to claim 27, wherein the at least one amino acid is chosen from glycine, alanine, valine, leucine, isoleucine, methionine, phenylalanine, proline, serine, threonine, cysteine, asparagine, glutamine, tyrosine, histidine, lysine, ornithine, arginine, aspartic acid, glutamic acid and tryptophan.

29. (Original) The process according to Claim 26, wherein at least one of compositions (a) and (b) further comprises at least one compound chosen from surfactants, polyols, polyol ethers, and aromatic monoalcohols.

30. (Original) The process according to Claim 26, further comprising applying to the keratin fibers a composition (c) comprising, in a medium suitable for dyeing, at least one amino acid.

31. (Original) The process according to Claim 30, wherein at least one of compositions (a), (b) and (c) furthers comprise at least one compound chosen from surfactants, polyols, polyol ethers, and aromatic monoalcohols.

32. (Original) The process according to Claim 26, wherein compositions (a) and (b) are mixed together just before use and the mixture thus obtained is applied to the keratin fibers for a leave-in time sufficient to obtain the desired coloration.

33. (Original) The process according to Claim 30, wherein compositions (a), (b) and (c) are mixed together just before use and the mixture thus obtained is applied to the keratin fibers for a leave-in time sufficient to obtain the desired coloration.

34. (Original) The process according to Claim 26, wherein compositions (a) and (b) are applied successively to the keratin fibers with optional intermediate rinsing, for a leave-in time sufficient to obtain the desired coloration, said compositions (a) and (b) being applied in any order.

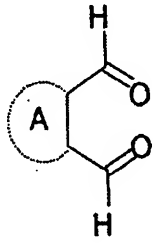
35. (Original) The process according to Claim 30, in which compositions (a), (b) and (c) are applied, successively and optionally with intermediate

rinsing, to the keratin fibers for a leave-in time sufficient to obtain the desired coloration, said compositions (a), (b) and (c) being applied in any order.

36. (Cancelled)

37. (Currently Amended) ~~The device according to Claim 36,~~ A multi-compartment device, comprising:

a first compartment comprising a composition (a) comprising, in a medium suitable for dyeing, at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I):



(I)

wherein A is chosen from:

- fused and non-fused, aromatic and non-aromatic monocarbocyclic and polycarbocyclic groups comprising from 6 to 50 carbon atoms;

- fused and non-fused, aromatic and non-aromatic, 5- to 30-membered monoheterocyclic and polyheterocyclic groups comprising at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus;

the group A possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl, C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals; and

a second compartment comprising a composition (b) comprising, in a medium suitable for dyeing, at least one sulphur compound chosen from compounds of formula (II) and of formula (III):

R-SH (II)

R-S-S-R' (III)

wherein R and R', which may be identical or different, are chosen from saturated and unsaturated, branched and unbranched groups comprising from 1 to 100 carbon atoms, optionally comprising from 1 to 30 unsaturations, and which may comprise at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus, R and R' possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl, C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, amino, C_1-C_4 monoalkylamino, C_1-C_4 dialkylamino, C_1-C_4 monohydroxyalkylamino, C_1-C_4 dihydroxyalkylamino, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals.

wherein composition (b) further comprises at least one amino acid.

38. (Original) The device according to claim 37, wherein the at least one amino acid is chosen from glycine, alanine, valine, leucine, isoleucine, methionine, phenylalanine, proline, serine, threonine, cysteine, asparagine, glutamine, tyrosine, histidine, lysine, ornithine, arginine, aspartic acid, glutamic acid and tryptophan.

39. (Cancelled)

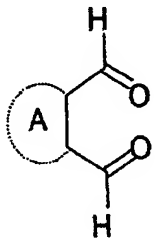
40. (Currently Amended) ~~The device according to Claim 36,~~ A multi-compartment device according to Claim 37, further comprising ~~further comprising~~ a third

compartment comprising a composition (c) comprising, in a medium suitable for dyeing, at least one amino acid.

41. (Original) The device according to Claim 40, wherein at least one of compositions (a), (b) and (c) further comprises at least one compound chosen from surfactants, polyols, polyol ethers, and aromatic monoalcohols.

42. (Original) A process for the optical lightening of keratin fibers, comprising applying to keratin fibers for a leave-in time sufficient to optically lighten the keratin fibers at least one composition comprising, in a medium suitable for dyeing:

at least one compound chosen from ortho- and α-dialdehyde compounds of formula (I):



(I)

wherein A is chosen from:

- fused and non-fused, aromatic and non-aromatic monocarbocyclic and polycarbocyclic groups comprising from 6 to 50 carbon atoms;
- fused and non-fused, aromatic and non-aromatic, 5- to 30-membered monoheterocyclic and polyheterocyclic groups comprising at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus;

the group A possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl,

C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals; and

at least one sulphur compound chosen from compounds of formula (II) and of formula (III):

R-SH (II)

R-S-S-R' (III)

wherein R and R', which may be identical or different, are chosen from saturated and unsaturated, branched and unbranched groups comprising from 1 to 100 carbon atoms, optionally comprising from 1 to 30 unsaturations, and which may comprise at least one hetero atom chosen from nitrogen, sulphur, oxygen and phosphorus, R and R' possibly being substituted with at least one radical chosen from halo, C_1-C_4 alkyl, hydroxyl, C_1-C_4 alkoxy, hydrogenocarbonyl, C_1-C_4 alkylcarbonyl, C_1-C_4 alkylthio, C_1-C_4 alkylcarboxyl, amino, C_1-C_4 monoalkylamino, C_1-C_4 dialkylamino, C_1-C_4 monohydroxyalkylamino, C_1-C_4 dihydroxyalkylamino, nitro, sulphonato, ammonio, C_1-C_4 trialkylammonio, imidazolio, pyridinio and benzothiazolio radicals.

43. (Original) The process according to Claim 42, wherein the at least one composition further comprises at least one amino acid.

44. (Original) The process according to Claim 42, wherein the at least one composition further comprises at least one compound chosen from surfactants, polyols, polyol ethers, and aromatic monoalcohols.